



State of Washington REPORT OF EXAMINATION FOR WATER RIGHT CHANGE

Changed Place of Use
Added Point of Withdrawal
Added Irrigated Acres

PRIORITY DATE
February 5, 1980

WATER RIGHT NUMBER
G3-26452C

MAILING ADDRESS
Kane Farms LLC
PO Box 8
Hartline, Washington 99135

SITE ADDRESS (IF DIFFERENT)
15777 Road 31 NE
Hartline, Washington 99135

Total Quantity Authorized for Withdrawal

WITHDRAWAL RATE	UNITS	ANNUAL QUANTITY (AF/YR)
3000	GPM	800

Total withdrawals or diversions from all sources must not exceed the total quantity authorized for withdrawal or diversion listed above.

Purpose

PURPOSE	WITHDRAWAL RATE		UNITS	ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE		ADDITIVE	NON-ADDITIVE	
Irrigation	3000			800		1/1 – 12/31

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
870			

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA	
Grant	Groundwater		42-Grand Coulee	

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Well 1 (existing)	180697000		24 N.	29 E.	27	NW¼SE¼	47.5460° N	119.1549° W
Well 2 (proposed)	180714000		24 N.	29 E.	34	NE¼NE¼	47.5382° N	119.1500° W

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

180697000, 180712000, 180713000, 180714000

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The E½ of Section 27, E¾ of Section 33, W½ of Section 34 and the NE¼ of Section 34, all within T. 24 N., R. 29 E.W.M.

Proposed Works

Two wells, main lines and pivot irrigation system

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
September 1, 2016	September 1, 2018	September 1, 2019

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Annually (Jan 31)
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

Provisions

This authorization to make use of public waters of the State is subject to existing rights, including any existing rights held by the United States for the benefit of Indians under treaty or otherwise.

Nothing in this authorization shall be construed as satisfying other applicable federal, state, or local statutes, ordinances, or regulations.

Family Farm

This authorization to use public waters of the state is classified as Family Farm Permit in accordance with chapter 90.66 RCW. This means the land being irrigated under this authorization shall comply with the following definition: Family Farm - a geographic area including not more than 6,000 acres of irrigated agricultural lands, whether contiguous or noncontiguous, the controlling interest in which is held by a person having a controlling interest in no more than 6,000 acres of irrigated agricultural lands in the state of Washington which are irrigated under water rights acquired after December 8, 1977. Furthermore, the land being irrigated under this authorization must continue to conform to the definition of a family farm.

Wells, Well Logs and Well Construction Standards

All wells constructed in the state must meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard must be decommissioned.

At such time that any reconstruction or replacement occurs on original Well No. 1 located in the NE¼SE¼ of Section 27, T. 24 N., R. 29 E.W.M., the well owner shall contact the Department to determine the casing and sealing requirements for this well.

At such time as construction begins on Well No. 2, location within NE¼NE¼ of Section 34, T. 24 N., R. 29 E.W.M., it shall be subject to the following requirements: According to WAC 173-160-181, any new or reconstructed well(s) shall be required to be constructed in such a manner to prevent the interchange of water between aquifers. To prohibit the interchange of aquifer waters in compliance with the casing and sealing requirements of Well 1 in the original Water Right, Well 2 must have a minimum of 460 feet

of casing sealed into the formation. Sealing shall be placed from the bottom of the well to the top until undiluted seal material returns to the surface through the annular space. After casing is sealed in place, the well may be completed by drilling out the casing until sufficient water is obtained. This is designed to assure separation of hydrologic head of the shallower Wanapum portion of the aquifer from the deeper Grande Ronde portion.

All wells must be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160-291(3) is required.

In addition to the required access port, the applicant must install and maintain, in operating condition, an airline and pressure gage. The pressure gage must be equipped with a standard tire valve and placed in a location accessible to Department of Ecology personnel. The airline must extend from land surface to the top of the pump bowls and the total airline length must be reported to the Department of Ecology upon completion of the pump system.

Any future pump test data shall be submitted as it is obtained to the Department of Ecology.

Measurements, Monitoring, Metering and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173, which describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Water use data shall be recorded monthly and maintained by the property owner for a minimum of five years. The maximum rate of withdrawal and the annual total volume shall be submitted to the Department of Ecology by January 31st of each calendar year. Recorded water use data shall be submitted to the Eastern Regional Office.

Easement and Right-of-Way

The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

Water Use Efficiency

The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

Proof of Appropriation

The water right holder must file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the water right. Elements of a proof

inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, will have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Real Estate Excise Tax

This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions, and therefore will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project. Phone: (360) 570-3265. The mailing address is: Department of Revenue, Real Estate Excise Tax, PO Box 47477, Olympia WA 98504-7477 Internet: <http://dor.wa.gov/>. E-mail: REETSP@DOR.WA.GOV.

Findings of Facts

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application for change to Ground Water Certificate No. G3-26452C, subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this action to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this document. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of this document:

- File your appeal and a copy of this document with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this document on Ecology in paper form - by mail or in person. (See addresses below.) Email is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 Pollution Control Hearings Board 1111 Israel Road SW Suite 301 Tumwater, WA 98501	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

For additional information visit the Environmental Hearings Office Website:
<http://www.eho.wa.gov> . To find laws and agency rules visit the Washington State Legislature
Website: <http://www1.leg.wa.gov/CodeReviser>

Signed at Spokane, Washington, this 12th day of August, 2014.



Keith L. Stoffel, Section Manager

For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>. To find laws and agency
rules visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>.

INVESTIGATOR'S REPORT

Dan Tolleson, Department of Ecology

Water Right Control Number CG3-26452C@1

Ground Water Certificate No. G3-26452C

Kane Farms LLC

BACKGROUND

This report serves as the written findings of fact concerning application for change/transfer to Ground Water Certificate No. G3-26452C. Kane Farms LLC proposes to change the place of use, and add one point of withdrawal and add additional acres of irrigation under this application.

EXISTING Water Right Attributes

Water Right Owner:	Kane Farms LLC		
Priority Date:	2/5/1980		
Place of Use	124 acre pivot within the NE¼ of Sec. 27; 118 acre pivot within the SE¼ of Sec. 27; and a 78 acre partial sweep pivot within NE¼ of Sec. 34, all within T. 24 N., R. 29 E.W.M.		

County	Waterbody	Tributary To	WRIA
Grant	Groundwater		42-Grand Coulee

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Irrigation of 320	3000	GPM	800	1/1	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Well 1	180697000		24 N.	29 E.	27	NW¼SE¼	47.5460° N	119.1549° W

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum in NAD83/WGS84.

REQUESTED Water Right Attributes

Applicant Name:	Kane Farms LLC		
Date of Application:	2/13/2014		
Place of Use	The E½ of Section 27, E¼ of Section 33, W½ of Section 34 and the NE¼ of Section 34, all within T. 24 N., R. 29 E.W.M.		

County	Waterbody	Tributary To	WRIA
Grant	Groundwater		42-Grand Coulee

Purpose	Rate	Unit	Acre-feet/yr	Begin Season	End Season
Irrigation of 870	3000	GPM	800	1/1	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Well 1 (existing)	180697000		24 N.	29 E.	27	NW¼SE¼	47.5460° N	119.1549° W
Well 2 (proposed)	180714000		24 N.	29 E.	34	NE¼NE¼	47.5382° N	119.1500° W

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum in NAD83/WGS84.

Legal Requirements for Requested Change

The following is a list of requirements that must be met prior to authorizing the proposed change.

Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Coulee City News-Standard on March 12 and 19, 2014, and no protests were received.

State Environmental Policy Act (SEPA)

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- (a) It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
- (b) It is a groundwater right application for more than 2,250 gallons per minute;
- (c) It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- (d) It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- (e) It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application entails the withdrawal of more than 2,250 gallons per minute, it is subject to SEPA. A final Determination of Non-Significance was issued by the Department of Ecology on July 8, 2014 stating that no environmental impact statement is required.

Water Resources Statutes and Case Law

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed if it would not result in harm or injury to other water rights.

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. *R.D. Merrill v. PCHB* and *Okanogan Wilderness League v. Town of Twisp*.

RCW 90.44.100 allows Ecology to amend a ground water permit to (1) allow the user to construct a replacement or additional well at a new location outside of the location of the original well, or to (2) change the manner or place of use of the water, if:

- (a) The additional or replacement well taps the same body of public ground water as the original well. RCW 90.44.100(2)(a),
- (b) Where a replacement well is approved, the user must discontinue use of the original well and properly decommission the original well. RCW 90.44.100(2)(b),
- (c) Where an additional well is constructed, the user may continue to use the original well, but the combined total withdrawal from all wells shall not enlarge the right conveyed by the original permit or certificate. RCW 90.44.100(2)(c),
- (d) Other existing rights shall not be impaired. RCW 90.44.100(2)(d).

When changing or adding points of withdrawal to groundwater rights (RCW 90.44.100), or when consolidating exempt wells with an existing permit or certificate (RCW 90.44.105), the wells must draw from the *same body of public groundwater*. Indicators that wells tap the *same body of public groundwater* include:

- (a) Hydraulic connectivity.
- (b) Common recharge (catchment) area.
- (c) Common flow regime.
- (d) Geologic materials that allow for storage and flow, with recognizable boundaries or effective barriers to flow.

RCW 90.66.065(5) states that the place of use of a family farm permit may be changed if it remains within the same water resource inventory area (WRIA). The place of use may also be changed if to a location outside the WRIA if it remains within the same or adjacent urban growth areas.

RCW 90.03.380(1) states that the acreage irrigated under a water right may be enlarged if the annual consumptive quantity is not increased. The annual consumptive quantity is the average of the highest two years, of the most recent five-year period of ongoing beneficial use of the water right.

INVESTIGATION

In considering the proposed application, the investigation included, but was not limited to, research and review of: (1) appropriate rules and statutes; (2) other water rights, permits and claims; (3) USGS topographic maps and air photographs; (4) authorized and proposed points of withdrawal; (5) authorized and proposed place of use; (6) Hydrogeologic Analysis: Coulee City dated October 3, 2012; and (7) discussions with Department of Ecology regional program staff.

A site visit was conducted by Dan Tolleson on January 27, 2014. The project is located approximately ten miles southwesterly of Hartline, Washington, within Grant County. This project lies within the "Wilson Creek-Coulee City Area". The Wilson Creek – Coulee City Area is a work area that was designated during a hydrogeologic study conducted in the 1980s for new water right applications. A second water availability study of the area was conducted in recent years and is documented in an Ecology internal report entitled *Hydrogeologic Analysis: Coulee City*, dated October 3, 2012.

The authorized place of use describes approximately 480 acres of rolling land bisected by a few small coulees. The area has two full sweep pivots and one partial sweep pivot irrigation system. A house and outbuilding are located in the southwestern corner of the E½ of Section 27 and a second house with

outbuildings is located in the middle of the northern edge of the NE¼ of Section 34. For the most part the remainder of the place of use is cultivated in dryland crops.

The proposed place of use includes the originally authorized place of use and 800 additional acres of land within portions of Sections 33 and 34. This land is for the most part cultivated in dryland crops, with a few small areas that are undeveloped. Kane Farm LLC proposes to add four new irrigation pivots within this additional land. They also propose to reset the stops on the existing partial sweep pivot to cover more land.

The authorized point of withdrawal is a well located near the middle of the E½ of Section 27. The well has a 500 hp turbine pump that is currently used to provide water for this right. In 2013, the pump for this well failed, which resulted in a screen being lost in the well. The pump has been repaired but was set at a shallower pumping depth, resulting in a lower pumping capacity.

The proposed well has not been constructed, but is intended to be within two years of approval. Its proposed location is to be within the NE¼NE¼ of Section 34, outside of the pivot sweep near a main power line.

Proposed Use

The applicant proposes to add an additional well and change the place of use, so that the acres of irrigation can be expanded from the originally authorized 320 acres to 870 acres total. The applicant proposes to irrigate some land at a higher water duty and spread the remainder of the right to augment dry land crops such as wheat. This expansion of acreage requires that the water rights total annual consumptive quantity cannot be increased according to RCW 90.03.380(1), POL-1210 and PRO-1210.

History of Water Use and Annual Consumptive Quantity

The "Wilson Creek – Coulee City Area" studies indicated that there were essentially two aquifers, that being the shallow Wanapum Basalt aquifer and the deep Grande Ronde Basalt aquifer. At the time this right was originally issued there was significant public concern that water was not available, but it was eventually determined water was available in the deep Grande Ronde aquifer. As a result of this determination the authorization for this right was issued along with seventeen others in 1987 to be cased and sealed into the deep Grande Ronde aquifer.

Aerial photographs were used to help verify the extent of development, historical and beneficial use of this project. Two full sweep pivots and one partial sweep pivot were developed by 1989, parts of which were developed outside the authorized place of use. An application was filed and approved to change the place of use to add the partial sweep pivot. A certificate of water right was issued in 2005, after an investigation was completed that indicated the permit was put to full beneficial use. This system of pivots has been in use since that time for the irrigation of 320 acres.

It is estimated that the maximum instantaneous quantities authorized under this water right were put to full beneficial use from the time it was developed until 2013. In 2013, the pump failed and a screen was lost in the well, which resulted in the pump being set at a higher level. The current configuration cannot produce the desired water quantities. Kane Farms proposes to construct a second well and will attempt to repair the damaged well at some point in the future. This proposed system of wells when completed

will restore capacity to the system. The withdrawal from both wells will be limited to 3000 gallons per minute at any given time.

The authorized water duty of this certificate is 2.5-acre-feet per year, per acre. Historically, this right was used to irrigate wheat, potatoes and timothy hay. In last four years, timothy hay was grown under this water right, which has the higher water duty requirements. Timothy hay has a similar cropping pattern and water use as alfalfa. The State of Washington Irrigation Guide (WA210-VI-WAIG) states that 3.1 acre-feet, per acre, for alfalfa is required in the Wilson Creek area. At a 90% efficiency rate of application from the drop tube pivots a total of 3.4 acre-feet per acre is required for irrigation. This means the water duty authorized under this right may not be sufficient in dry years for some crops. Therefore, the maximum authorized quantity of 800 acre-feet has been put to full beneficial use. Since the applicant has requested to expand irrigated acres, the water right's total annual consumptive quantity cannot be increased.

Annual Consumptive Quantity (ACQ)

Annual Consumptive Quantity is a calculation that is used to make certain that specific types of changes to a water right do not cause enlargement. ACQ is the average of the highest two years, of the most recent five-year period of ongoing beneficial use of the water right, less return flows.

The two highest water use years during the most recent consecutive five year period of use, will be determined by using the State of Washington Irrigation Guide (WA210-VI-WAIG). This guide will be used since no meter data exists for this project. In the most recent four out of the last five years of use, timothy hay has been grown within the entire place of use. Timothy hay has the highest water duty requirement of the crops grown under this water right. During the 2010-2012 seasons a full allotment of water was used for timothy hay, but water use was limited in the 2013 season due to pump issues. Given the crop type, actual water use in 2010-2012 may have been more than was authorized but this cannot be verified, since no meter data is available. This means that the average use of the two highest years in the last five is the maximum authorized annual quantity of 800 acre-feet.

An estimate for consumptive water use will be derived from Guidance GUID-1210. According to this Guidance, a center-pivot irrigation system without end-guns that utilizes drop tubes with spray head, have an average efficiency rate of 90% and an average evaporation rate of 10%. Given this calculation, the system virtually has no return flows. Although no method of application is completely efficient, it is estimated that the return flow generated by this system is negligible. Therefore, since the proposed irrigation system is the same as the existing and any return flows are negligible, this change is not anticipated to result in any negative affects to return flows.

Therefore, given the above ACQ calculations, 800 acre-feet of water is available annually for this proposed change. **Irrigation beyond what is authorized may be subject to fines of up to \$5,000 per day, per violation.**

Well Metering and Tags

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173, which describes the requirements for data accuracy, device installation and operation,

and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Water use data shall be recorded monthly and maintained by the property owner for a minimum of five years. The maximum rate of withdrawal and the annual total volume shall be submitted to the Department of Ecology by January 31st of each calendar year. Recorded water use data shall be submitted to the Eastern Regional Office.

WAC 173-160 contains requirements for well drillers, system operators and/or owners to tag new and existing wells with identification tags supplied by Ecology. The well identification program creates a standard system to identify all newly constructed or existing wells, so that property owners and various agencies can readily share well data. In addition, Ecology field staff use the well tag to identify the well. Accordingly, this decision contains provisions requiring each well to be tagged with a unique identification number.

Other Rights Appurtenant to the Place of Use

A review of Ecology records was conducted for existing water right certificates, permits, and claims in the surrounding area of this project. The search focused primarily on Sections 27, 33 and 34 of T. 24 N., R. 29 E.W.M. The review of Ecology records shows two water right claims appurtenant to portions of the place of use which are as follows:

Ground Water Right Claim No. 048689 was filed on a short form by Pat Kane for domestic use, stockwater and irrigation. This claim appears to be in use to provide water for the mobile home and outbuildings located in the northern part of Section 34, T. 24 N., R. 29 E.W.M.

Ground Water Right Claim No. 097370 was filed on a short form by Earl Kane for domestic use. This claim appears to be in use to provide water for the house and outbuildings located in the southern part of Section 27, T. 24 N., R. 29 E.W.M.

The validity and extent of above listed water rights are not determined in this report.

Hydrologic/Hydrogeologic Evaluation

The following hydrogeologic analysis was written by Tracy Band, Hydrogeologist, and was reviewed by Guy J. Gregory, L.G., L.Hg. Hydrogeologist and Unit Supervisor of the Water Resources Program Technical Unit in Ecology's Eastern Regional office.

Applications for change of water right permits and certificates are governed by RCW 90.44.100, which states in part that the holder of a valid right to withdraw public ground waters may, without losing his priority of right, construct wells at a new location in substitution for, or in addition to, those at the original location, or he may change the manner or the place of use of the water. Any amendment shall be issued by the Department of Ecology (Ecology) only under the conditions that (1) an additional or substitute well or wells shall tap the same body of public ground water as the original well or wells; (2) use of the original well or wells shall be discontinued upon construction of the substitute well or wells; (3) the construction of an additional well or wells shall not enlarge the right conveyed by the original permit or certificate; and (4) all existing water rights shall not be impaired. Ecology may specify an

approved manner of well construction and shall require a showing of compliance with the provisions of the amendment.

The proposed change to add one point of withdrawal is located in a large ground water reservoir occurring in a thick series of basalt flows known as the Columbia River Basalt Group. The thicknesses of the basalts vary from a few hundred feet at the Spokane River to over 10,000 feet in the Pasco Basin. The existing and proposed wells associated with this change application must produce water from the same aquifer system and as such, must both produce water from the same body of public groundwater.

The existing well, Well 1, is located within T. 24 N., R. 29 E., in the NW¼SE¼ of Section 27. It was originally drilled in 1991 to a depth of 565 feet, and deepened to a depth of 1120 feet in 1992. The well is used for irrigation purposes. It was drilled through topsoil and into basalt, and has been cased to a depth of 460 feet, and cemented down to a depth of 395 feet. The static water level at the time of drilling was 455 feet. Yields at the time of drilling are not known. The altitude of the Grande Ronde Basalt Member for the well is approximately 1550 feet above sea level (ASL) (U.S. Geological Survey Water-Resources Investigation Report 87-4238, Sheet 3). With a land surface elevation of 1820 feet ASL, this puts the top of the Grande Ronde at 270 feet below land surface.

The proposed well, Well 2, has not been constructed. The proposed location for Well 2 is located within T. 24 N., R. 29 E., in the NE¼NE¼ of Section 34. The altitude of the Grande Ronde Basalt Member for the proposed well location is approximately 1520 feet ASL (U.S. Geological Survey Water-Resources Investigation Report 87-4238, Sheet 3). With a land surface elevation of approximately 1780 feet ASL, this puts the top of the Grande Ronde at 260 feet below land surface. The change in head between the Wanapum aquifer and the Grande Ronde aquifer typically does not occur at the formation contact. It has been our experience that the head change can occur as much as 200 feet below the formational contact. To prohibit the interchange of aquifer waters in compliance with the casing and sealing requirements of Well 1 in the original Water Right, Well 2 must have a minimum of 460 feet of casing sealed into the formation. Sealing shall be placed from the bottom of the well to the top until undiluted seal material returns to the surface through the annular space. After casing is sealed in place, the well may be completed by drilling out the casing until sufficient water is obtained. This is designed to assure separation of hydrologic head of the shallower Wanapum portion of the aquifer from the deeper, Grande Ronde portion.

Impairment Considerations

“Impair” or “impairment” means to 1) adversely impact the physical availability of water for a beneficial use that is entitled to protection, not including earlier filed applications, and/or 2) to prevent the beneficial use of the water to which one is entitled, and/or 3) to adversely affect the flow of a surface water course at a time when the flows are at or below instream flow levels established by rule; and/or 4) degrade the quality of the source to the point that water is unsuitable for use by existing water right holders (WAC 173-150).

According to the Hydrogeologic Evaluation, the proposed well, provided it is constructed properly, will withdraw water from the same source as the authorized source. The proposed change to add a point of withdrawal and add additional acres of irrigation will not enlarge the quantity of water historically authorized, nor will it impair existing rights. There has been documented history of general groundwater level declines and of pumping interference problems between existing wells in this area. It

is not anticipated that the proposed change would cause any impairment to existing water right. No additional quantity is requested with this change, thus general groundwater level declines will not increase because of this change. In the unforeseen event that the new well causes impairment to existing rights, it will be treated as a junior appropriator and regulated accordingly.

Public Interest Considerations

There has been no public expression of protest or concern regarding this specific proposal, and no findings through this investigation indicate that there would be any detrimental impact to the public welfare through issuance of the proposed change.

Conclusions

In accordance with Chapters 90.03 and 90.44, approval of this application to change the place of use, and add one point of withdrawal and add additional acres of irrigation as granted under Ground Water Certificate No. G3-26452C will not enlarge the quantity of water historically authorized, nor will it impair existing rights or be detrimental to the public welfare provided the terms and conditions above are followed.

The amount of water recommended is a maximum limit that shall not be exceeded, and the water user may only use that amount of water within the specified limit that is reasonable and beneficial. This authorization does not increase in any way the original amounts authorized.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a change/transfer be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

3000 gallons per minute
800 acre-feet per year
Irrigation of 870 acres, seasonally

Points of Withdrawal

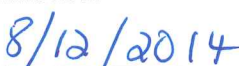
Well 1 – NW¼SE¼ of Section 27, Township 24 North, Range 29 E.W.M.
Well 2 – NE¼NE¼ of Section 34, Township 24 North, Range 29 E.W.M.

Place of Use

As described on Page 1 of this Report of Examination.



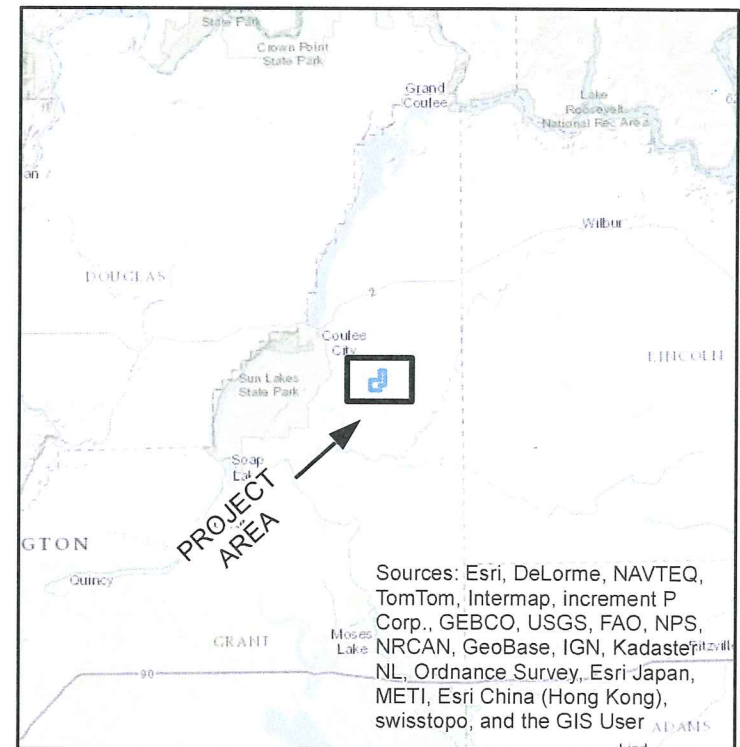
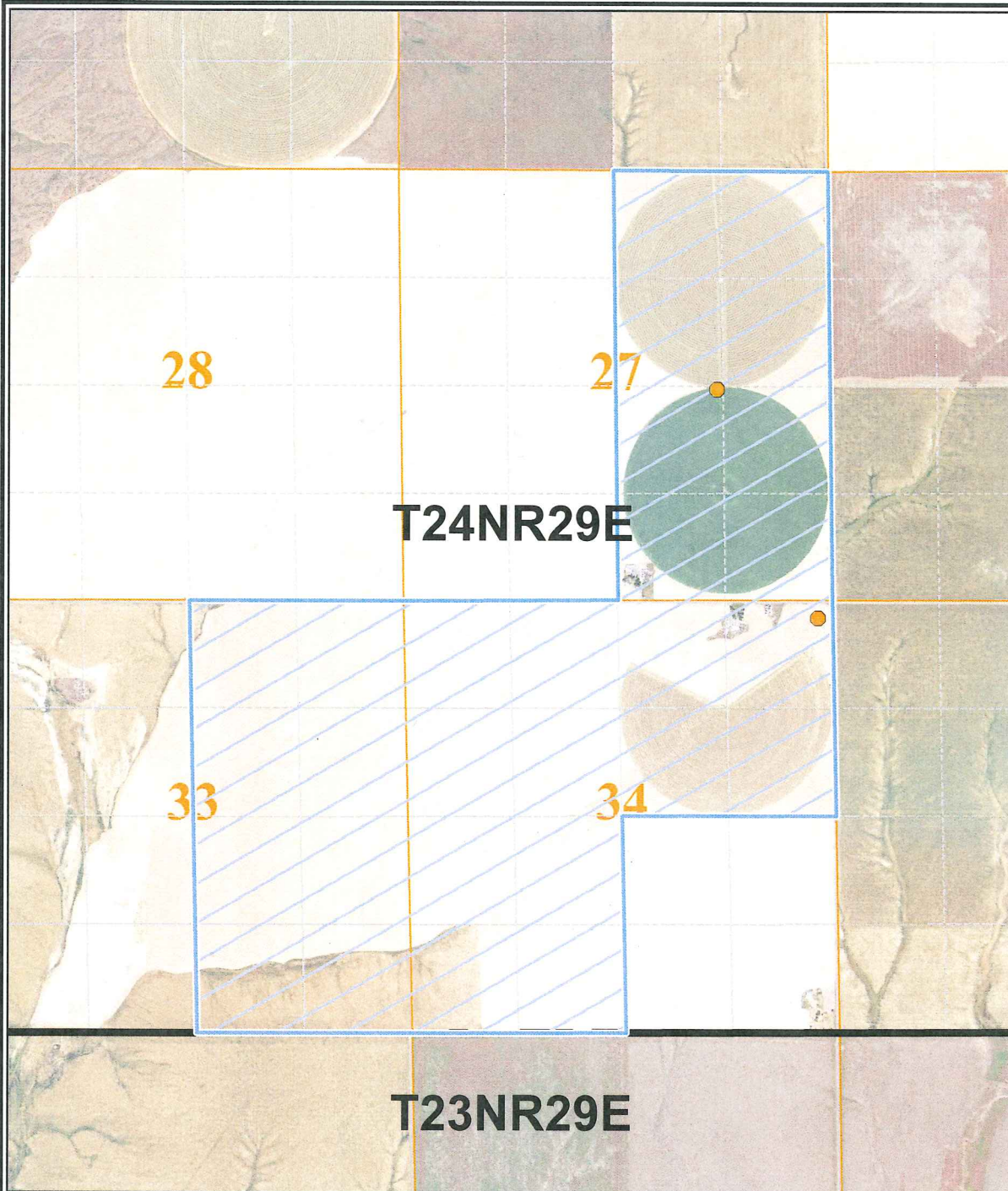
Dan Tolleson, Report Writer



Date

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Kane Farms LLC
Application
T24N/R29E



Basemap - (ESRI US Topographic Maps)

Legend



Authorized Place of Use



Townships



Sections



Authorized Point of Withdrawal

0 660 1,320 2,640 3,960 5,280 6,600 Feet
Basemap - (NAIP 2011 1m color)

Map Date: 8/11/2014



Comment:

Place of use and source locations are as defined within the Report of Examination cover sheet for the document identified in the header above.